Arthroscopic meniscal repair

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SUMMARYThe importance of the menisci in the knee has becomeincreasingly apparent in recent·years, as additional knowledgeof its various functions has been -gained. They contribute tothe stability of the knee, they are important in load sharingand transmission, they help in lubrication and facilitate thenutrition of the articular cartilage, and their experimentalremoval results in irrevocable effects on the articularcartilage.The surgical management of meniscal injuries has been acontroversial issue among surgeons since the first openmeniscectomy was done in 1866. Recent reports haveemphasized the long-term consequences of total openmeniscectomy such as degenerative arthritic changes,instability, and changes in transmission of load across theknee joint. Also, the early long-term results after partialmeniscectomy has suggested its detrimental effects.Although total open meniscectomy used to be one of themost common of all orthopaedic procedures, and technique andinstruments were developed to ensure the completeness ofresection, a concentrated effort in the recent few years isbeing made, whenever practicable, to save as much of themeniscus as possible.The position and vulnerability of the menisci in an areaof rapidly changing torque, shear, and compressive forcesreflects on their complex functions and importance.218In this work, we evaluated the case of fifty knees infifty patients with an arthroscopically proved meniscal tear.All knees in this study were sUbjected to: clinicalassessment, diagnostic arthroscopy, and arthroscopic meniscalrepair using outside to inside to outside technique.In order to concentrate entirely on the results of themeniscal surgery, all knees included in this work wereselected as follows; there was no ligamentous laxity as provedclinically, it has not been operated on previously, no othersurgical operations was carried out at the same time ofarthroscopic meniscal repair and all meniscal tears were inthe vascular repairable area of the meniscus and in the middleor anterior zones i.e. either longitudinal at zero millimeterto four millimeters from the menisco-synovial junction or adetached anterior horn tear as proved arthroscopically. Alsothere were no marked degenerative changes as proved clinicallyand radiographically.The average patient age at the time of surgery was 25years (range 19 to 34 years).The follow-up period averaged 20.5 months (range 6 to 35months) •There were thirty (60%) peripheral tears and twenty (40%)detached anterior horn tears.There welle thirty seven (74%) tears of the medicalmeniscus and thirteen (26%) of the lateral meniscus.219The right knee was affected in thirty-two (64%) and theleft knee in eighteen (36%) patients.The length of time from injury to surgery averaged 10.68months with a range from one to thirty-six months.Due to the general absence of symptoms in most of thecases, follow-up arthroscopy was

not practical or possible inall cases because it was very difficult to convinceasymptomatic patient to have an operation. Therefore, weconsidered healing after arthroscopic meniscal repair onclinical bases using the criteria of Hamberg et al (1983).The overall results showed that(86%) were asymptomatic and sevensymptomatic.forty-three patients(14%) patients wereOf the thirty periphral tears, twenty-five repairedmenisci (83.3%) were classified healed, two (6.7%) asincompletely healed and three (10%) as not healed. Of thetwenty detached anterior horn tears, eighteen (90%) wereclassified as healed and two (10%) as not healed.We concluded that, in general, the higher rate of healingwas associated with the more peripheral tears. Also thedetached anterior horn tears showed a higher rate of healing(90%) than did the longitUdinal peripheral tears (83.4%). Thelength of tear and history of locking did not sUbstantiallyaffect the rate of healing. The interval between injury andsurgery did not significantly affects the rate of healing.220Forty-five (90%) patients were able to return to the sameactivity in which they had been injured; including the fiveparachute jumpers.Fortunately, there were no neurological or vascularcomplications in this series.As meniscectomy, either total or partial, open orar1:hroscopic, is not a benign procedure, meniscal repair isseE~ms to be a logical alternative to restore the normalkinematics of the knee joint.Our early-term results of arthroscopic meniscal repairhas:indicated its protective effects. However, this procedurewill be vindicated only after longer-term studies which willshow either its success or its failure in preventing thechanges in the joint that are noted after meniscectomy.Until these studies are forthcoming, we believe thatarthroscopic meniscal repair can be done safely, with reliable.results, and should be the procedure of choice for repairablelesions of the meniscus.